

KEY MAP OF WASHINGTON SHOWING LOCATION OF PROJECT



UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE -- REGION SIX



COLVILLE NATIONAL FOREST

THREE RIVERS RANGER DISTRICT

DRAWINGS FOR PROPOSED
KETTLE FACE SOUTH
STEWARDSHIP

INDEX TO SHEETS

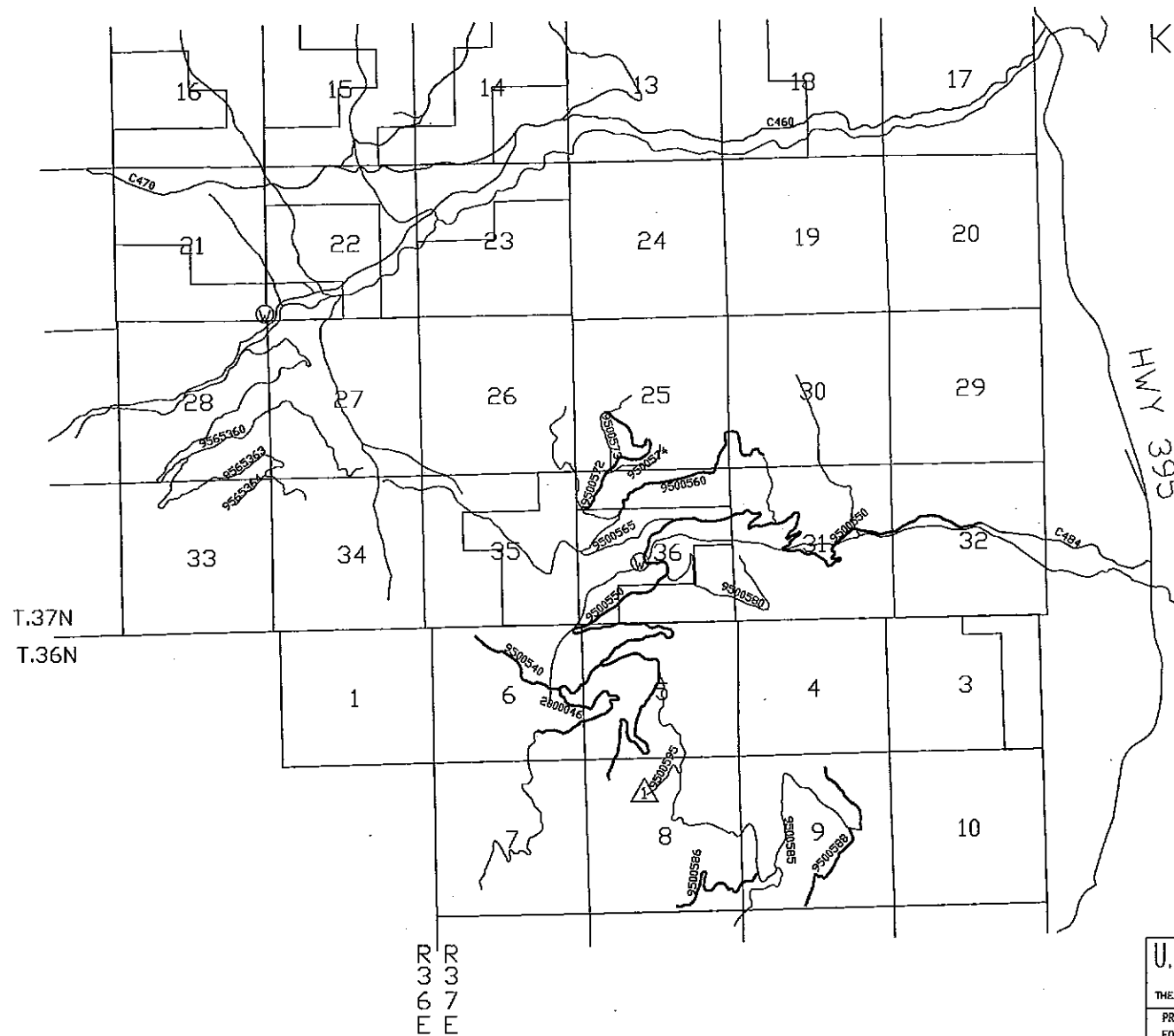
NO.	DESCRIPTION
1	TITLE SHEET
2	VICINITY MAP
3	ESTIMATE OF QUANTITIES
4	ROAD TYPICALS
5	CULVERT DETAIL
6	DRAINAGE DETAILS
7	CULVERT LISTING
8	GATE DETAIL
9	PIT PLAN
10-12	WORK LISTS

ROAD NUMBER	LENGTH	RECONST CONST	SHEET NUMBER	CRITICAL VEHICLE	DESIGN VEHICLE
2000046R	1.17	RECONST	10	YARDER	LOG TRUCK
9500540R	1.16	RECONST	10	YARDER	LOG TRUCK
9500550R	7.21	RECONST	11	YARDER	LOG TRUCK
9500560R	1.41	RECONST	11	YARDER	LOG TRUCK
9500572R	0.96	RECONST	11	LOG TRUCK	LOG TRUCK
9500585R	0.61	RECONST	12	YARDER	LOG TRUCK
9500586R	0.73	RECONST	12	LOG TRUCK	LOG TRUCK
9500588R	0.67	RECONST	12	YARDER	LOG TRUCK

TOTAL RECONSTRUCTION 13.92 MILES

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION COLVILLE NATIONAL FOREST		KETTLE FACE SOUTH STEWARDSHIP THREE RIVERS R.D. COLVILLE NAT'L FOREST KETTLE FALLS, WA	
PROJECT ENGINEER	_____	TITLE SHEET	SHT. 1 OF 12
FOREST ENGINEER	_____		
DISTRICT RANGER	_____		

KETTLE FACE SOUTH STEWARDSHIP T.37N, R.36E



NOT TO SCALE

LEGEND

- RECONSTRUCTION
ROADS
- ▲ PIT SOURCE
BISBEE PIT
- ⊙ WATER SOURCE

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION COLVILLE NATIONAL FOREST

PROJECT ENGINEER _____
FOREST ENGINEER _____
DISTRICT RANGER _____

KETTLE FACE SOUTH
STEWARDSHIP
THREE RIVERS R.D.
COLVILLE NAT'L FOREST
KETTLE FALLS, WA

VACINITY
MAP

SHT. 2
OF 12

Kettle Face South Stewardship

SHEET	TOTAL SHEETS
3	12

ESTIMATE OF QUANTITIES

Item Number	Description	Unit	Project Road Number and Length								Project Totals	Remarks
			2000046R 1.17 mi	9500540R 1.16 mi	9500550R 7.21 mi	9500560R 1.41 mi	9500572R 0.96 mi	9500585R 0.61 mi	9500586R 0.73 mi	9500588R 0.67 mi		
			Quantities									
15101	Mobilization	ls	All	All	All	All	All	All	All	All		
15219	Establishing clearing limits	mile	1.17	1.16	0.74	0.65	0.63	0.61	0.66	0.67	6.29	
20103	Clearing and grubbing, disposal of tops and limbs f.), logs f, and stumps f.	mile	1.17	1.16	0.74	0.65	0.63	0.61	0.66	0.67	6.29	
20402	Roadway excavation, compaction method C, finishing method C.	mile	1.17	1.16	3.30	1.03	0.63	0.61	0.73	0.67	9.30	
20404	Unclassified borrow, compaction method C, finishing method C	cy		30	95						125	
20420A	Drainage excavation, type Drain Dip	each	3	2					1		6	
20420B	Drainage excavation, type Outslope Drain	each	7	8	4	7			2	3	31	
32222	Pit run maximum size 6" compaction method H	cy	100	134	50	56			24	49	413	
60211A	18 inch corrugated steel pipe, 0.064 inch thickness	ft		36							36	
62501	Seeding dry method	acre	2.55	2.52	5.9	1.42	1.37	1.33	1.60	1.47	18.16	
65001	Furnish and Install Road Closure Device Type II Gate, Size 16 feet	each		1		1					2	

(NOT TO SCALE)

The diagram illustrates a cross-section of a ditch and embankment. Key features and labels include:

- CUT SLOPE RATIO UNLESS OTHERWISE SHOWN:**
 - $1/4:1$ IN SOLID ROCK
 - $1:1$ IN COMMON
- Dimensions:**
 - X : Horizontal distance from the ditch edge to the start of the embankment.
 - M : Horizontal distance from the ditch edge to the top of the embankment.
 - N : Horizontal distance from the ditch edge to the end of the embankment.
 - Y : Vertical height of the embankment.
 - Z : Vertical height of the ditch.
 - H : Horizontal distance from the ditch edge to the start of the embankment.
 - D : Horizontal distance from the ditch edge to the start of the embankment.
 - W : Extra roadbed width when ditch section is specified on aggregate surfaced roads.
- Labels:**
 - CLEARING LIMIT**: Indicated at the top and bottom of the embankment.
 - TURNOUT**: Indicated on the embankment.
 - GEOTEXTILE WHEN SPECIFIED**: Indicated on the embankment.
 - FILL SLOPE RATIO UNLESS OTHERWISE SHOWN:**
 - $1-1/4:1$

1. CURVE WIDENING, WHEN SPECIFIED, SHALL BE ADDED TO INSIDE OF CURVE.
2. TAPER LENGTH ON CURVE WIDENING IS LOCATED IN THE CURVE DATA BOX ON THE PLAN SHEETS.
3. SEEDING AND/OR MULCHING AREA INCLUDES SECTIONS SHOWN ON TYPICALS AND ALL OTHER AREAS DISTURBED BY CONTRACTOR.
4. TURNOUTS AND CURVE WIDENING SHALL BE SURFACED TO SAME DEPTH AS THE TRAVELED WAY AND TO THE DIMENSIONS SPECIFIED IN THE PLANS.
5. CONSTRUCTION STAKES SHALL BE 0.3 in. THICK X 1.5 in. WIDE X 24 in. LONG, +/- 0.1in. THICKNESS AND THE TOP 2in. TO BE PAINTED RED. CLEARING FLAGGING SHALL BE GLO PINK. STAKES SHALL BE SET ON UPHILL SIDE OF CENTERLINE.
6. SLOUGH WIDENING "Z" SHALL BE 1ft. WHERE FILLS ARE 5ft. OR LESS AND 2ft. WHERE FILLS ARE GREATER THAN 5ft.
7. ALL DITCHES SHALL BE SLOPED TO DRAIN.
8. SEEDING IS NOT REQUIRED WHERE SLOPE RATIOS ARE 1/2:1 OR STEEPER.
9. ROADWAY FINISHING FOR ALL ROADS IS METHOD C PER FSSS 204.13
10. IN AREAS WHERE DD OR OSD FALL WITHIN A DESIGNATED AGGREGATE SPREAD, PLACE AGGREGATE AS SHOWN IN DRAINAGE DETAIL.

- 1/ OUTSLOPE ALL ROADS EXCEPT INSLOPE IN DITCHED AREAS AND CULVERT CATCH BASINS UNLESS OTHERWISE SHOWN ON PLANS.
- 2/ AT LOCATIONS SHOWN ON THE DRAWINGS.
- 3/ CONSTRUCT ADDITIONAL WIDTH IN ALL AREAS WHERE PLACEMENT OF AGGREGATE IS SHOWN ON THE PLANS
- 4/ CLEARING LIMITS SHALL BE ESTABLISHED FROM STAKE NOTES OR 13 FEET FROM CENTERLINE WHICHEVER IS GREATER.
- 5/ DEPTHS AS SHOWN IN THE PLANS

DD=DRAIN DIP
OSD=OUTSLOPE DRAIN
TOR=TURNOUT RIGHT
TOL=TURNOUT LEFT
TAR=TURNAROUND RIGHT
TAL=TURNAROUND LEFT
CWR=CURVE WIDENING
RIGHT
CWL=CURVE WIDENING
LEFT
LOD=LEADOUT DITCH
——=GROUND
— —=GRADE

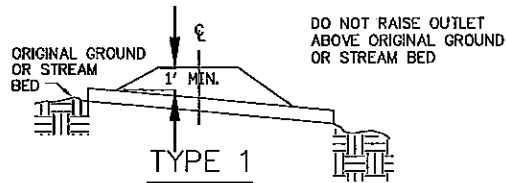
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PROJECT ENGINEER	_____
FOREST ENGINEER	_____
DISTRICT RANGER	_____

ROAD
TYPICAL

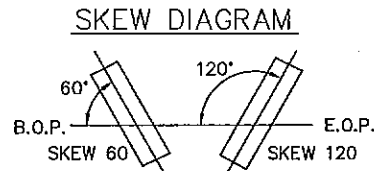
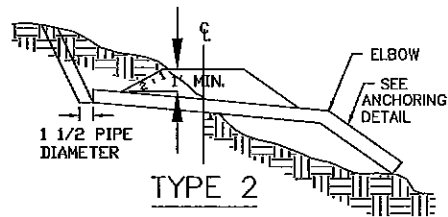
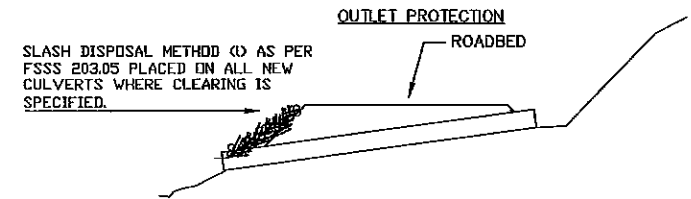
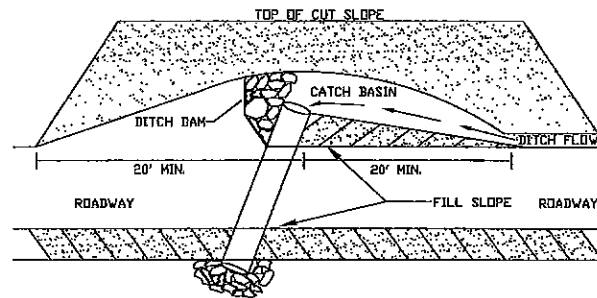
CULVERT DETAILS

CULVERT TYPES

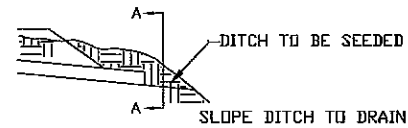


CATCH BASIN DETAIL AND INLET & OUTLET PROTECTION

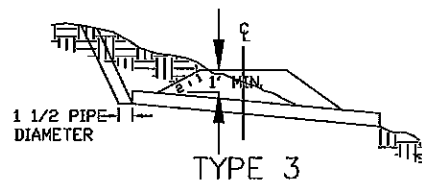
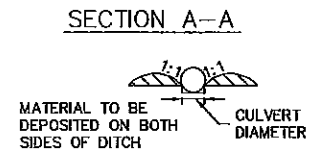
FOR ALL NEW TYPE 1, 2 & 3 CULVERT INSTALLATION



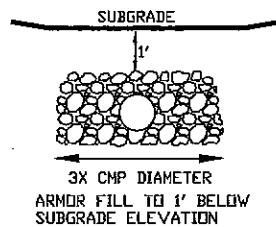
LEADOUT DITCH



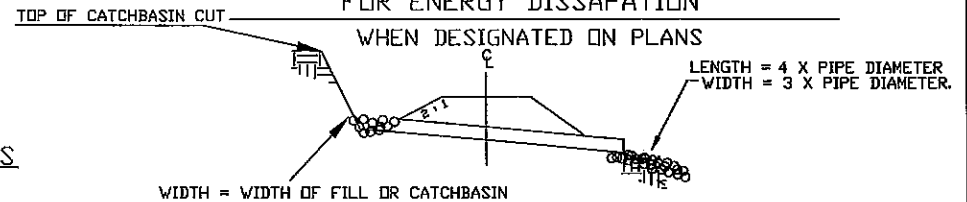
LEADOUT DITCH



ARMORING CULVERT FILL SLOPES



RIPRAP CULVERT INLET & OUTLET FOR ENERGY DISSIPATION

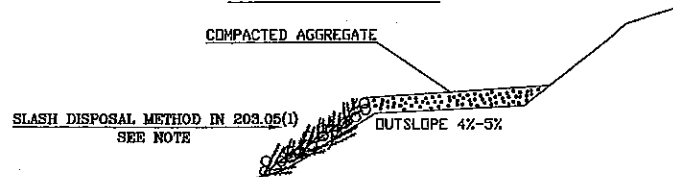


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PROJECT ENGINEER		CULVERT DETAIL	SHT. 5
FOREST ENGINEER			OF 12
DISTRICT RANGER			

DRAINAGE DETAILS

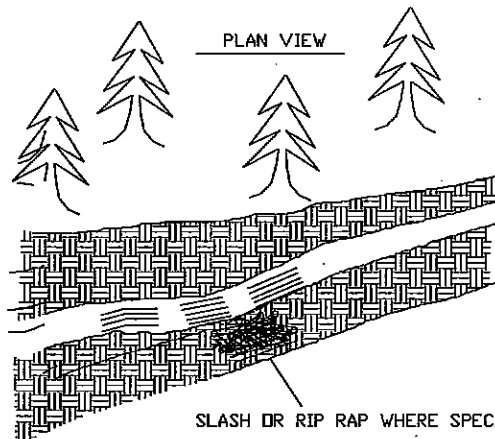
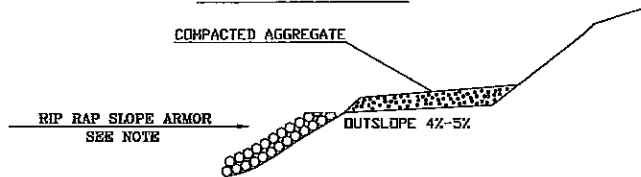
OUTSLOPE DRAIN & DRAIN DIP

SLOPE TREATMENT



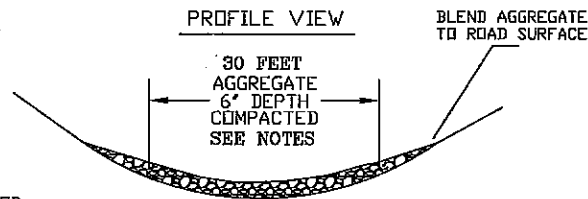
OUTSLOPE DRAIN & DRAIN DIP

SLOPE TREATMENT

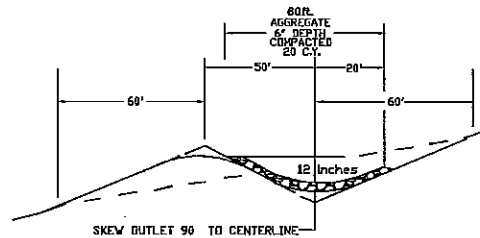


OUTSLOPE DRAIN DETAIL (OSD)

PROFILE VIEW

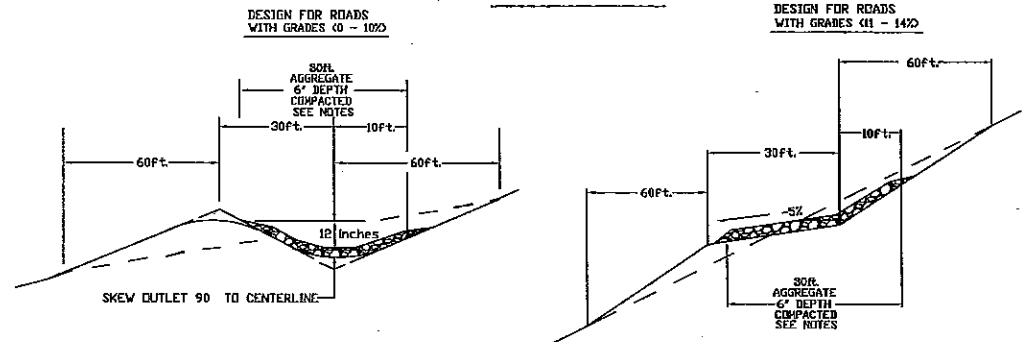


DESIGN FOR ROADS WHERE
CRITICAL VEHICLE IS A LOWBOY
WITH GRADES (0 - 7%)



DRAIN DIP DETAILS (DD)

PROFILE VIEW



NOTES:

WHEN GEOTEXTILE IS SPECIFIED IN DRAIN DIPS OR OUT SLOPE DRAINS, SIZE SHALL BE 15'W X 30'L

DO NOT INTERCEPT DITCH WATER WHERE DRAIN DIPS OR OUT SLOPE DRAINS ARE DESIGNATED IN DITCHED SECTIONS, UNLESS OTHERWISE SPECIFIED.

SLASH SHALL BE PLACED ON FILL SLOPES TO A DEPTH OF 1' AT THE LOWEST POINT IN DRAIN DIP OR OUTSLOPED DRAIN, AND EXTEND 5' EACH WAY. THIS APPLYS TO ALL NEW AND RESHAPED DRAINS THAT ARE WITHIN ALL CLEARING LIMIT AREAS.

PLACE RIP RAP ON FILL SLOPES OF DRAIN DIP OR OUTSLOPED DRAINS WHERE SPECIFIED, 1' DEEP, EXTENDING 4' EACHWAY OF LOWEST POINT.

12' ROADBEDS REQUIRE 8 C.Y. OF IN PLACE AGGREGATE
14' ROADBEDS REQUIRE 10 C.Y. OF IN PLACE AGGREGATE

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION COLVILLE NATIONAL FOREST

PROJECT ENGINEER
FOREST ENGINEER
DISTRICT RANGER

KETTLE FACE SOUTH
STEWARDSHIP
THREE RIVERS R.D.
COLVILLE NAT'L FOREST
KETTLE FALLS, WA

DRAINAGE
DETAIL

SHT. 6
OF 12

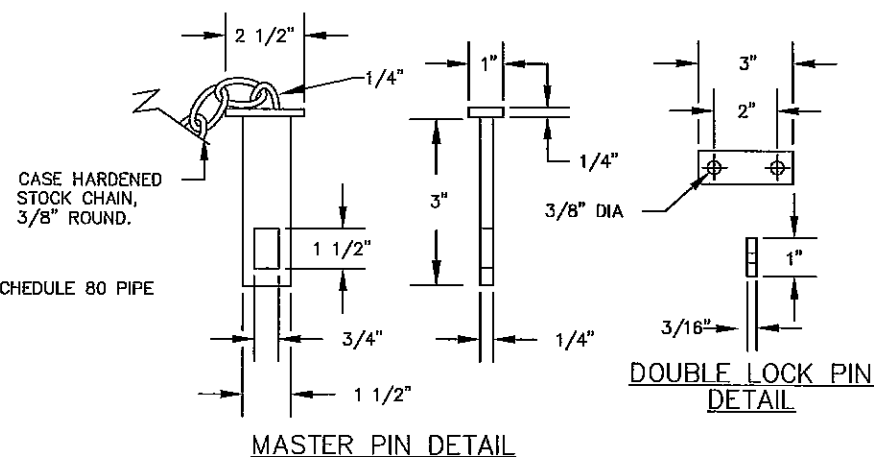
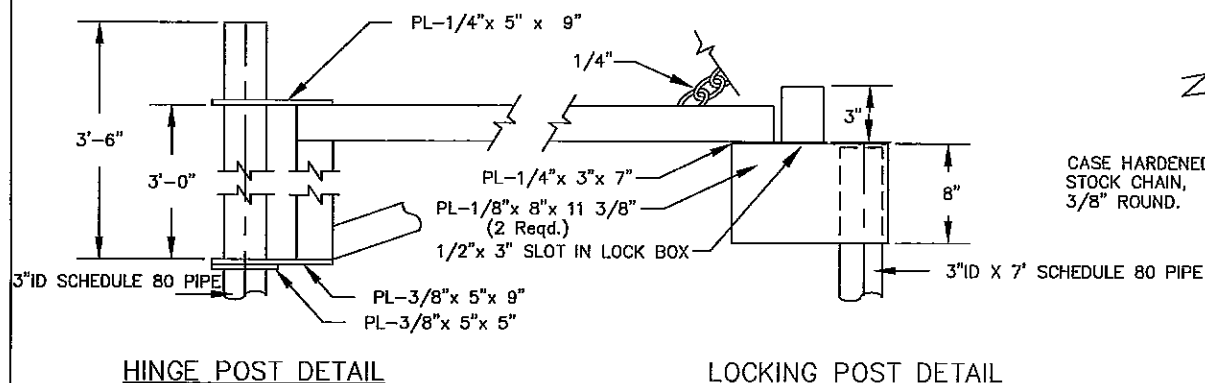
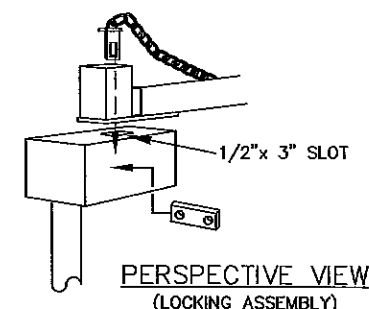
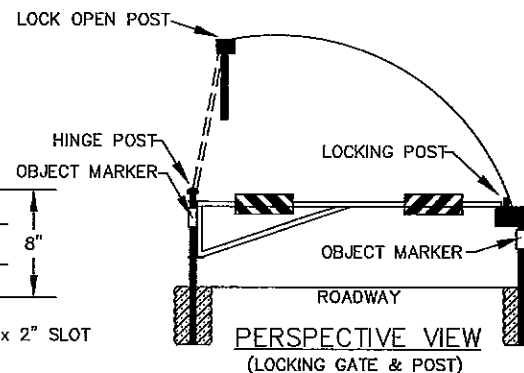
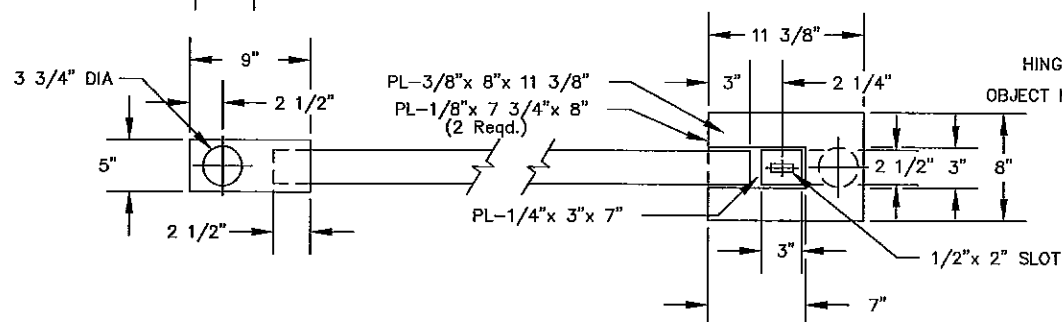
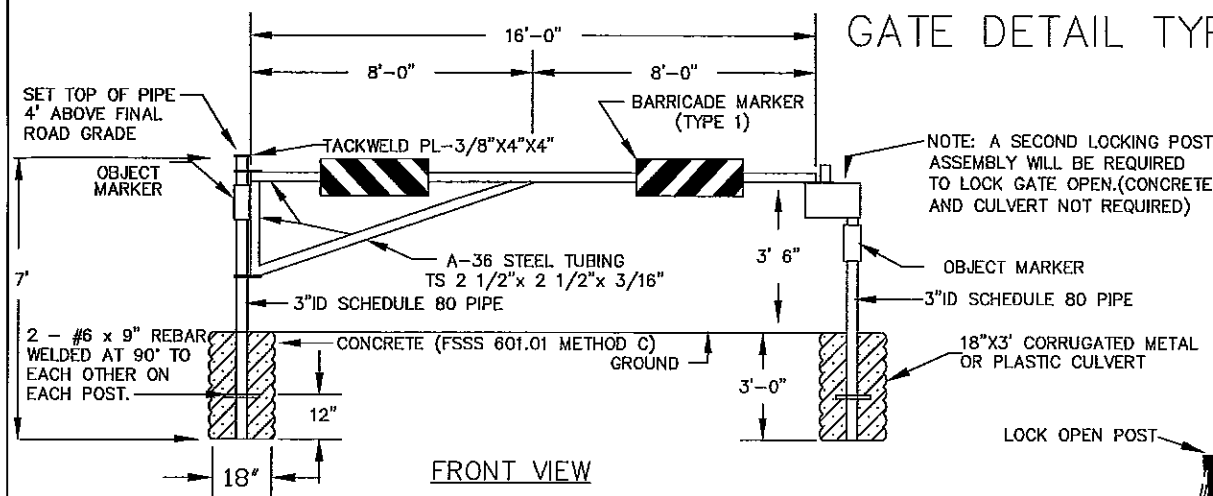
CULVERT LISTING

DESIGNED			AS BUILT			CORRUGATION & THICKNESS		INSTALLATION DETAILS				GA. - GAUGE AL. - ALUMINUM FE. - STEEL TF. - TO FIT SLASH DISPOSAL METHOD (1) AS PER FSSS 203.05 SHALL BE PLACED ON ALL CULVERT INSTALLATIONS WHERE CLEARING IS SPECIFIED.
STATION OR MILE POST	DIAMETER IN INCHES	LENGTH IN FEET	STATION	DIAMETER IN INCHES	LENGTH IN FEET	2 2/3" x 1/2" .064 FE (16 GA.) OR .060 AL (16 GA.)		TYPE	SKEW	COMPACTION METHOD	STAKING METHOD	
Rd 9500540												REMARKS
0+15	18	36				X		1	TF	A	1	

GATE DETAIL TYPE II

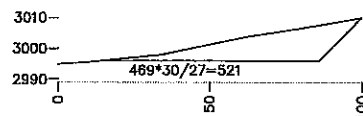
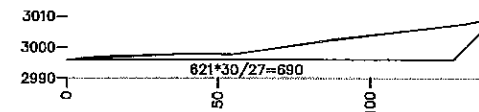
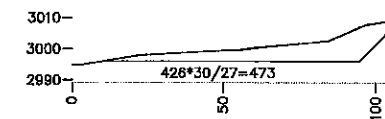
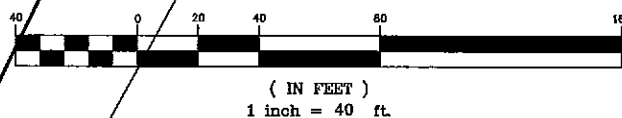
NOTES

1. EXTERIOR METAL EPOXY PAINT, COCOA BROWN UNLESS OTHERWISE APPROVED BY THE ENGINEER.
2. BARRICADE MARKERS SHALL MEET MUTCD REQUIREMENTS FOR TYPE 1. COLOR - RED & WHITE. (4 REQUIRED,) 2 LEFT SIDE STRIPE, 2 RIGHT SIDE STRIPE.
3. OBJECT MARKERS SHALL MEET MUTCD REQUIREMENTS FOR TYPE 2. (6 REQUIRED.)
4. ALL WELDS REQUIRED TO MANUFACTURE GATE, UNLESS OTHERWISE SHOWN, SHALL BE FILLET AND SHALL BE OF THE SAME SIZE AS THE THICKNESS OF THE SMALLER OF THE TWO PIECES BEING JOINED.



NANCY CREEK PIT

GRAPHIC SCALE



OPERATION NOTES

- 1) ALL OPERATIONS SHALL BE IN ACCORDANCE WITH M.S.H.A AND OTHER APPLICABLE STATE AND FEDERAL REGULATIONS.
- 2) CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF HIS ACTIVITIES WITH OTHER USERS.
- 3) EXCAVATION AREA WILL BE STAKED BY THE FOREST SERVICE.
- 4) MATERIAL WILL BE SCREENED AND OVERSIZE SHALL BE STOCKPILED IN OVERSIZE STOCKPILE AREA.
- 5) CUT SLOPES SHALL BE NO STEEPER THAN 3/4:1 STOCKPILES OF OVERBURDEN AND CUT SLOPES IN COMMON MATERIALS SHALL BE SHAPED.
- 6) EXCAVATION SHALL PROCEED UNIFORMLY VERTICALLY AND HORIZONTALLY WITH NO HUMPS OR DIPS CREATED WITHIN THE EXCAVATION AREA.
- 7) ALL MATERIALS MANUFACTURED SHALL BE STOCKPILED OR DISPOSED OF IN AREAS DESIGNATED BY THE FOREST SERVICE.
- 8) SURFACE DAMAGE WHICH CAUSES SOIL MOVEMENT AND/OR WATER POLLUTION MUST IMMEDIATELY BE CORRECTED TO FOREST SERVICE SATISFACTION. ROADS IN THE OPERATION AREA SHALL BE PROTECTED FROM EROSION BY THE PLACEMENT OF WATER CONTROL DEVICES WHEN DIRECTED BY THE FOREST SERVICE.
- 9) FINAL GRADING AND CLEANUP SHALL BE COMPLETED IMMEDIATELY AFTER ROCK REMOVAL. ALL AREAS SHALL BE FREE DRAINING.
- 10) ALL REFUSE SHALL BE REMOVED FROM NATIONAL FOREST LAND.
- 11) RESHAPING OF ACCESS ROAD TO BE KEPT CURRENT WITH OPERATIONS AND AT END OF OPERATIONS.
- 12) SCHEDULE OCCUPANCY OF PIT WITH THE GEOLOGIST AT THE FOREST SUPERVISORS OFFICE.

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KETTLE FACE SOUTH
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COLVILLE NAT'L FOREST
KETTLE FALLS, WA

PROJECT ENGINEER _____
FOREST ENGINEER _____
DISTRICT RANGER _____

NANCY CREEK
PIT
SHT. 9
OF 12

Kettle Face South Stewardship

WORK SUMMERY

SHEET
10OF
12ROAD 2000046R

STA	MP	WORK ITEMS
0+00		Begin establishing clearing limits
		Begin clearing and grubbing
		Begin blading and shaping 14' roadbed
3+60		Construct DD
8+32		Construct OSD
10+03		Construct OSD
13+39		Construct DD
15+60		Construct OSD
32+90		Jct Lt
38+00		Construct DD
39+70		Construct OSD
41+50		Construct OSD
54+50		Construct OSD
58+70		Construct OSD
61+65		Construct TAL
		End establishing clearing limits
		End clearing and grubbing
		End blading and shaping 14' roadbed
		EOP

ROAD 9500540R

STA	MP	WORK ITEMS
0+00		Jct of 9500550
0+15		Install 18" X 36' CMP
		Haul and place 30cy of borrow to cover pipe
		Begin establishing clearing limits
		Begin clearing and grubbing
		Begin blading and shaping 14' roadbed
		Install type II gate as staked by CO
0+50		Construct DD
2+00		Construct OSD
5+70		Construct OSD
11+20		Construct OSD
14+20		Begin placing 4" of aggregate
14+95		End placing 4" of aggregate
20+12		Construct DD
20+50		Jct of 2000046 Lt
22+22		Construct OSD
23+00		Begin placing 4" of aggregate
23+25		Construct OSD
24+10		End placing 4" of aggregate
27+20		Construct OSD
29+20		Construct OSD
46+00		Construct OSD
52+85		Begin constructing TOR
53+10		Construct TAL
53+35		End constructing TOR
54+58		Construct OSD
58+75		Begin constructing TOR
59+00		Construct TAL
59+25		End constructing TOR
61+00		End establishing clearing limits
		End clearing and grubbing
		End blading and shaping 14' roadbed
		EOP

ROAD 9500550R

STA	MP	WORK ITEMS
	0.00	Jct of C484
		Begin blading and shaping 14' roadbed
	0.73	Begin placing 4" of aggregate
	0.74	End placing 4" of aggregate
	1.74	Begin placing borrow to fill in ruts
	1.81	End placing borrow
	2.50	Begin placing borrow to fill in ruts
	2.56	End placing borrow
		End blading and shaping 14' roadbed
	6.47	Begin establishing clearing limits
		Begin clearing and grubbing
		Begin constructing 14' roadbed
	6.54	Construct OSD
0+00	6.61	Equation Station Mp 6.61 Back = Sta 0+00 Ahead
1+14		Construct OSD
6+40		Construct OSD
7+75		Reshape existing TAR
11+90		Construct OSD
31+10		Begin constructing TOL
31+35		Construct TAR
31+60		End constructing TOL
31+85		End establishing clearing limits
		End clearing and grubbing
		End constructing 14' roadbed
		EOP

Note:

Underground power lines near or in roadbed. Not sure of depth or actual location. Lines need to be located before excavation.

ROAD 9500560R

STA	MP	WORK ITEMS
0+00		Jct of 9500565
2+40		Begin removing earth berms
		Install Type 2 gate as staked by CO
2+97		End removing earth berms
13+50		Construct OSD
20+15		Begin constructing 14' roadbed
23+60		Construct OSD
40+00		End constructing 14' roadbed
40+40		Protect fence and barb wire gate
		Begin establishing clearing limits
		Begin clearing and grubbing
		Begin blading and shaping 14' roadbed
		Construct OSD
43+10		Begin constructing TOR
50+80		Construct TAL
51+05		End constructing TOR
51+30		Construct OSD
51+75		Construct OSD
53+45		Construct OSD
60+43		Construct OSD
65+55		Construct OSD
68+50		Begin 8' CWL
69+50		End 8' CWL
		Begin 6' CWR
70+50		End 6' CWR
74+70		End establishing clearing limits
		End clearing and grubbing
		End blading and shaping 14' roadbed
		EOP

ROAD 9500572R

MP	WORK ITEMS
0.00	Jct of 9500565
0.33	Begin establishing clearing limits
	Begin clearing and grubbing
	Begin blading and shaping 12' roadbed
0.95	Begin constructing TOL
0.96	Construct TAR
	End constructing TOL
	End establishing clearing limits
	End clearing and grubbing
	End blading and shaping 12' roadbed
	EOP

Kettle Face South Stewardship

WORK SUMMERY

SHEET
12OF
12ROAD 9500585R

MP	WORK ITEMS
3.54	Jct. tower road protect improvements
	Begin establishing clearing limits
	Begin clearing and grubbing
	Begin blading and shaping 14' roadbed
4.14	Begin Constructing TOL
4.15	Construct TAR
	End constructing TOL
	End Establishing clearing limits
	End clearing and grubbing
	End blading and shaping 14' roadbed
	EOP

ROAD 9500588R

STA	MP	WORK ITEMS
0+00		Jct of 9500585
		Begin establishing clearing limits
		Begin clearing and grubbing
		Begin constructing 14' roadbed
10+80		Construct OSD
23+74		Construct OSD
26+65		Construct OSD
33+30		Begin placing 4" of aggregate
34+50		End placing 4" of aggregate
34+75		Begin constructing TOL
35+00		Construct TAR
35+25		End constructing TOL
35+50		End constructing 14' roadbed
		End clearing and grubbing
		End establishing clearing limits
		EOP

ROAD 9500586R

STA	MP	WORK ITEMS
0+00		Jct of 9500585
		Begin blading and shaping 12' roadbed
3+85		Begin establishing clearing limits
		Begin clearing and grubbing
18+70		Construct DD
25+30		Construct OSD
35+22		Construct OSD
38+75		End establishing clearing limits
		End clearing and grubbing
		End blading and shaping 12' roadbed
		EOP

Timber Sale:

Road Number

Kettle Face South**2000046**

Prepared By:

Date Prepared:

6/3/2013

				Specified Road Estimate (Timber Sale)	
Item No.	Description	Unit	Quantity	Unit Price	Total \$
15101	Mobilization	ls	All	\$856.43	\$856.43
15219	Establish Clearing Limits	mi	1.17	\$967.64	\$1,132.14
20103	Clearing and Grubbing, Slash Treatment Methods for Tops and Limbs f,l, Logs f, and Stumps f.	mi	1.17	\$1,039.49	\$1,216.20
20402	Roadway excavation, compaction method C, finishing method C	mi	1.17	\$1,713.41	\$2,004.69
20420A	Drainage Excavation, Type Drain Dip	each	3	\$171.34	\$514.02
20420B	Drainage Excavation, Type Outslope Drain	each	7	\$85.67	\$599.69
32222	Pit run maximum size 4 inches, compaction method H	cy	100	\$17.81	\$1,781.00
62501	Seeding, Dry Method	ac	2.55	\$296.25	\$755.44

Total - Specified Road Cost Estimate **\$8,859.61**

FS-7700-18 (11/90)

Timber Sale:	Road Number
Kettle Face South	9500540

Prepared By:	Date Prepared:
	6/3/2013

				Specified Road Estimate (Timber Sale)	
Item No.	Description	Unit	Quantity	Unit Price	Total \$
15101	Mobilization	ls	All	\$1,114.62	\$1,114.62
15219	Establish Clearing Limits	mi	1.16	\$967.64	\$1,122.46
20103	Clearing and Grubbing, Slash Treatment Methods for Tops and Limbs f,l, Logs f, and Stumps f.	mi	1.16	\$1,039.49	\$1,205.81
20402	Roadway excavation, compaction method C, finishing method C	mi	1.16	\$1,656.99	\$1,922.11
20404	Unclassified borrow, compaction method C, finishing method C	cy	30	\$16.63	\$498.90
20420A	Drainage Excavation, Type Drain Dip	each	2	\$171.34	\$342.68
20420B	Drainage Excavation, Type Outslope Drain	each	8	\$85.67	\$685.36
32222	Pit run maximum size 4 inches, compaction method H	cy	134	\$15.37	\$2,059.58
60250A	18-inch corrugated steel pipe, .064 inch thickness	ft	36	\$35.64	\$1,283.04
62501	Seeding, Dry Method	ac	2.52	\$296.25	\$746.55
65001	Furnish and Install Road Closure Device Type II Gate, Size 16 feet	each	1	\$2,715.29	\$2,715.29

Total - Specified Road Cost Estimate **\$13,696.40**

FS-7700-18 (11/90)

Timber Sale:	Road Number
Kettle Face South	9500550

Prepared By:	Date Prepared:
	6/3/2013

				Specified Road Estimate (Timber Sale)	
Item No.	Description	Unit	Quantity	Unit Price	Total \$
15101	Mobilization	ls	All	\$1,056.73	\$1,056.73
15219	Establish Clearing Limits	mi	0.74	\$967.64	\$716.05
20103	Clearing and Grubbing, Slash Treatment Methods for Tops and Limbs f,l, Logs f, and Stumps f.	mi	0.74	\$1,036.22	\$766.80
20402	Roadway excavation, compaction method C, finishing method C	mi	3.30	\$1,713.41	\$5,654.25
20404	Unclassified borrow, compaction method C, finishing method C	cy	95	\$13.70	\$1,301.50
20420B	Drainage Excavation, Type Outslope Drain	each	4	\$85.67	\$342.68
32222	Pit run maximum size 4 inches, compaction method H	cy	50	\$20.35	\$1,017.50
62501	Seeding, Dry Method	ac	5.90	\$296.25	\$1,747.88

Total - Specified Road Cost Estimate **\$12,603.39**

Timber Sale:

Road Number

Kettle Face South**9500560**

Prepared By:

Date Prepared:

6/3/2013

				Specified Road Estimate (Timber Sale)	
Item No.	Description	Unit	Quantity	Unit Price	Total \$
15101	Mobilization	ls	All	\$728.22	\$728.22
15219	Establish Clearing Limits	mi	0.65	\$967.64	\$628.97
20103	Clearing and Grubbing, Slash Treatment Methods for Tops and Limbs f,l, Logs f, and Stumps f.	mi	0.65	\$1,031.44	\$670.44
20402	Roadway excavation, compaction method C, finishing method C	mi	1.03	\$1,713.41	\$1,764.81
20420B	Drainage Excavation, Type Outslope Drain	each	7	\$85.67	\$599.69
32222	Pit run maximum size 4 inches, compaction method H	cy	70	\$22.47	\$1,572.90
62501	Seeding, Dry Method	ac	1.42	\$296.25	\$420.68
65001	Furnish and Install Road Closure Device Type II Gate, Size 16 feet	each	1	\$2,715.29	\$2,715.29

Total - Specified Road Cost Estimate **\$9,101.00**

FS-7700-18 (11/90)

Timber Sale:	Road Number
Kettle Face South	9500572

Prepared By:	Date Prepared:
	6/3/2013

				Specified Road Estimate (Timber Sale)	
Item No.	Description	Unit	Quantity	Unit Price	Total \$
15101	Mobilization	ls	All	\$428.11	\$428.11
15219	Establish Clearing Limits	mi	0.63	\$967.64	\$609.61
20103	Clearing and Grubbing, Slash Treatment Methods for Tops and Limbs f,l, Logs f, and Stumps f.	mi	0.63	\$1,036.22	\$652.82
20402	Roadway excavation, compaction method C, finishing method C	mi	0.63	\$1,713.41	\$1,079.45
62501	Seeding, Dry Method	ac	1.37	\$296.25	\$405.86

Total - Specified Road Cost Estimate **\$3,175.85**

FS-7700-18 (11/90)

Timber Sale:	Road Number
Kettle Face South	9500585

Prepared By:	Date Prepared:
	6/3/2013

				Specified Road Estimate (Timber Sale)	
Item No.	Description	Unit	Quantity	Unit Price	Total \$
15101	Mobilization	ls	All	\$284.40	\$284.40
15219	Establish Clearing Limits	mi	0.61	\$967.64	\$590.26
20103	Clearing and Grubbing, Slash Treatment Methods for Tops and Limbs f,l, Logs f, and Stumps f.	mi	0.61	\$1,036.22	\$632.09
20402	Roadway excavation, compaction method C, finishing method C	mi	0.61	\$1,713.41	\$1,045.18
62501	Seeding, Dry Method	ac	1.33	\$296.25	\$394.01

Total - Specified Road Cost Estimate **\$2,945.94**

FS-7700-18 (11/90)

Timber Sale:

Road Number

Kettle Face South**9500586**

Prepared By:

Date Prepared:

6/3/2013

				Specified Road Estimate (Timber Sale)	
Item No.	Description	Unit	Quantity	Unit Price	Total \$
15101	Mobilization	ls	All	\$473.96	\$473.96
15219	Establish Clearing Limits	mi	0.66	\$967.64	\$638.64
20103	Clearing and Grubbing, Slash Treatment Methods for Tops and Limbs f,l, Logs f, and Stumps f.	mi	0.66	\$1,040.14	\$686.49
20402	Roadway excavation, compaction method C, finishing method C	mi	0.73	\$1,713.41	\$1,250.79
20420A	Drainage Excavation, Type Drain Dip	each	1	\$171.34	\$171.34
20420B	Drainage Excavation, Type Outslope Drain	each	2	\$85.67	\$171.34
32222	Pit run maximum size 4 inches, compaction method H	cy	24	\$14.80	\$355.20
60250A	18-inch corrugated metal pipe, .064 inch thickness for steel or .060 inch thickness for aluminum, method A	ft	36	\$35.64	\$1,283.04
62501	Seeding, Dry Method	ac	1.60	\$296.25	\$474.00

Total - Specified Road Cost Estimate **\$5,504.80**

FS-7700-18 (11/90)

Timber Sale:	Road Number
Kettle Face South	9500588

Prepared By:	Date Prepared:
	6/3/2013

				Specified Road Estimate (Timber Sale)	
Item No.	Description	Unit	Quantity	Unit Price	Total \$
15101	Mobilization	ls	All	\$502.80	\$502.80
15219	Establish Clearing Limits	mi	0.67	\$967.64	\$648.32
20103	Clearing and Grubbing, Slash Treatment Methods for Tops and Limbs f,l, Logs f, and Stumps f.	mi	0.67	\$1,030.44	\$690.39
20402	Roadway excavation, compaction method C, finishing method C	mi	0.67	\$1,713.41	\$1,147.98
20420B	Drainage Excavation, Type Outslope Drain	each	3	\$85.67	\$257.01
32222	Pit run maximum size 4 inches, compaction method H	cy	55	\$16.70	\$918.50
62501	Seeding, Dry Method	ac	1.47	\$296.25	\$435.49

Total - Specified Road Cost Estimate **\$4,600.49**